# Zentralblatt für Bakteriologie Mikrobiologie und Hygiene

International Journal of Medical Microbiology and Hygiene

founded in 1887

### Abstracts

of Microbiology, Virology, Parasitology, Preventive Medicine and Environmental Hygiene

Editors: G. Henneberg, Berlin (West) · H. D. Brede, Frankfurt a. M.

In Cooperation with W. Bartocha, Berlin (West) · H. Brunner, Wuppertal

H. Dizer, Berlin (West) · K. A. W. Gerber, Berlin (West)

H. Hussels, Berlin (West) · K. Janitschke, Berlin (West) · A. Kaufhold, Aachen

W. Köhler, Jena · H. Krauss, Gießen · G. Linzenmeier, Essen

H. Mochmann, Berlin-Buch · G. Peters, Köln · H. Raettig, Berlin (West)

A. Rodloff, Berlin (West) · G. Schallehn, Bonn · R. Sonak, Münster

G. Spicher, Berlin (West) · F. Staib, Berlin (West)

G. Steidten, Berlin (West) · H. Stolp, Bayreuth

Volume 311



Gustav Fischer Verlag · Stuttgart · New York · 1989/90

ISSN 0937-1591

© Gustav Fischer Verlag, Stuttgart/New York 1989/90 All rights reserved Printed by Karl Grammlich, Pliezhausen Printed in Germany

## General Medical Microbiology

97-136;193-215

History, Epidemiology, Communicable Diseases (Legislation)

General, History
Epidemiology, Geomedicine
Communicable Diseases, Legislation and Statistics

Biology of Microorganisms	97-127
Taxonomy, Classification, Description of Bacteria	97-99
Morphology, Ultrastructure, Chemical Composition, Function Nuclear Region Ribosomes Cytoplasmic Membrane	99 <b>-1</b> 00 99
Cell Envelope: Cell Wall, Outer Membrane Structures Flagella Endospores Protoplasts, Spheroplasts, L-Forms	99-100
Other Cell Structures	100
Physiology General Nutrition	100-105 100-101 102
Growth Transport Osmoregulation	102-103 103 103
Bacterial Adherence Antimicrobial Effects Drug Resistance Pathogenicity, Virulence	104 104-105 105
Metabolism	105-115
Energy Metabolism: Electron Transfer, Aerobic and Anaerobic Respiration, Fermentations Degradation, Pathways, Transformations Metabolism and Biosynthesis of Proteins, Peptides, Amino Acids, Other Organic	105-106 106-107
N-Compounds Nucleic Acids, Nucleotides, Nucleosides, Purine	107-108
and Pyrimidine Bases Carbohydrates, Polysaccharides, Lipopolysaccharides Lipids, Glycolipids, Phospholipids, Lipoproteins,	108-109 109
Fatty Acids Murein, Cell Membrane Constituents	109 110
Antigens and Other Compounds Enzymes and their Regulation Mineral Metabolism	110 110-113 113-114
Chemolithotrophic, Methylotrophic, Methanogenic, Photo- trophic, Halophilic Microorganisms Microbial Products incl. Antibiotics and Toxins	114-115
N <sub>2</sub> -Fixation	115

Genetics and Molecular Biology General, Biochemical Genetics Cloning, Genetic Engineering Mutation, Mutants	115-127 115-120 120-122 120
Gene Transfer Plasmids,Transposons Bacterial Viruses Bacteriocins	122-125 125-126 126-127
Applied Microbiology and Biotechnology Industrial Processes and Products Food Microbiology Biodeterioration	
Microbial Ecology General Habitats, Dispersal, Interactions	127 127
Methods in Microbiology	128-132
Physical Methods	100
Chemical Methods Analytical Methods Stains	128 128
Microscopy, Electron Microscopy Culture Media	128-129
Isolation, Cultivation	129
Detection, Recovery, Diagnosis, Identification Serological Methods	129-130 130
Susceptibility Testing	130-131
Methods of Preservation	
Cell Culture Laboratory Animals, Animal Experiments	132
Laboratory Annuals, Annual Experiments	132
Disinfection, Sterilization, Pest Control	133-136
Disinfection Pasteurization and Preservation	133-136
Sterilization Inactivation and Reactivation of Microorganisms: Other Information	
Pest Control	136
Chemotherapeutics and Chemotherapy	193-215
General, Methods of Evaluation	193-196
Chemotherapeutics Synthetic Substances	196-199
β-Lactam-Antibiotics	199-202
Other Antibiotics	202-205
Chemotherapy Medical Use of Antibiotics	205-211
incured obe of Antibiotics	211-215

Immunity and Blood-group Research	1-46 216-262;369-379
Immunology	1-46;216-262
Laboratory Techniques	1-5;216-220
General Immunology	5-6;220-221
Cellular Immunology	6-15;221-222
General	6-8
B Cells	8;222-223
T Cells	9-11;223-226
Natural Killer Cells	11-12;226-227
Macrophages	12-13;227-228
Mast Cells Cytotoxicity	13
Cytotomerty	14;228
Receptors AIDS	14-15;228-229
Antigens	15;229-230
Haptens/Incomplete Antigens	15-17;230-232
Immunoglobulins	17 00.020 020
General	17-22;232-238
IgA	17-18;232-234 18-19;234
IgD	10-13,234
IgE	19;234-235
IgG	19-20;235-236
IgM	13-20, 233-230
Monoclonal Antibodies	20-22;236-238
Immunodeficiency	20 22,200 200
Complement	22-24;238-239
Interferon	24;239-240
Immune Complexes, Antigen-Antibody Reactions	25;240-241
Hypersensitivity	25-26;241-242
Allergens	26-27;242-243
Allergy/Atopy	27-29;243-245
Immunochemistry	29-30
Immunomodulation	30-34;245-250
General	30-31;245-247
Lymphokines	
Interleukin 1	31-32;247-248
Interleukin 2	32-33;248-249
Interleukin 3	33;249-250
Interleukin 4,5,6	33-34;250
Leukotrienes	interfer las an
Toxins, Endotoxins, Immunotoxins	34-35
Immunosuppression	35-36;250-252
Immunopotentiation	36-37
Serology of Infectious Diseases	37-38;252-254
Serology of Non-infectious Diseases	39
Serology of Chronic Polyarthritis	20 40.054 055
Autoimmune Diseases	39-40;254-255
Tumor Immunology	40-41;255-256
Oncogenes	256-257
Transplantation-Immunology	41-43;257-259
Immune Tolerance	43-44;259-260
Vaccines and Sera	44;260 44-45;260-261
Applied Immunology	77 70,200-201

Bio-Engineering Effects of Radiation on Immunologic Immunogenetics Miscellaneous, Unspecific Defense M	46;262-263	
	369-379	
Blood and Blood-group Serology		
Blood Contents Blood, Serum Proteins, Serum Group	369-370	
Blood-groups (Erythrocyte-Determi	nants) 370-371	
Blood-group Serology	371-375	
Bloodtransfusions	375-379	
Special Medical Microbiology, Including Co Diseases and their Control, Special Immun	otherapy and	
Chemotherapy	137-179; 264-360	
	380-407;449-510	ı
Bacteriology		
Micrococcaceae		
Micrococcus Staphylococcus		
Streptococcus (incl.S.pneumoniae)		
Peptococcaceae		
Peptococcus		
Peptostreptococcus Sarcina		
Neisseriaceae	904 974	
Neisseria	264-274 264-265	
Neisseria gonorrhoeae	265-268	
Neisseria meningitidis	268-272	
Acinetobacter Moraxella	272	
Branhamella	273 273-274	
Other Neisseriaceae	213-214	ı
Veillonellaceae		
Lactobacillaceae	074 000	
Lactobacillus	274-280 274-275	
Listeria		
Erysipelothrix	275-279 279-280	
TEAL	210 200	ı
Enterobacteriaceae	449-450	
Escherichia coli Adherence	450-453	
Detection	453-455 455-456	
Enterotoxin	456-459	
Fimbriae	459-460	
Infections Pili	460-462	•
Pln Plasmids	463	
Resistance	463	
	464	2

Vaccine	NAMES OF PERSONS AND COMMISSION OF PERSONS A	464-465
Verotoxin		465-466
Edwardsiella		
Citrobacter		466
Salmonella		
Salmonellae		466-469
Salmonellosis		469-470
S.enteritidis		470
S.typhi		470-472
S.typhimurium		472-476
Salmonellae Types		476-478
Shigella		
Shigellae		478-480
Shigellosis		480-481
S.flexneri	parance residence parameter over	481-483
S.sonnei		483-484
Shigella Species		484-485
Klebsiella		485-487
Kluyvera		487
Enterobacter		488-489
Hafnia		
Serratia		489-490
Proteus		490
Yersinia		
Yersinia enterocolitica		490-492
Infections		492-494
Virulence	makele autor	494-495
Yersinia pestis		495-496
Y.pseudotuberculosis		496-497
Erwinia		
Other Enterobacteriaceae		
Pseudomonadaceae		497-510
Pseudomonas		457-310
Pseudomonas aeruginosa		497-499
Antibodies		500-501
Clinical		501-502
Toxin		502-505
Antibiotics		505-506
		506-507
Immunity P. pacudomalloi		507-509
P. pseudomallei		507-509
Species		209-210
Vibrionaceae		

Vibrionaceae Vibrio

> Cholera Aeromonas Plesiomonas

Pasteurellaceae

Pasteurella Haemophilus Actinobacillus

Propionibacteriaceae Propionibacterium Eubacterium

Gram-Negative Aerobic Rods and Co Azotobacter	THE RESERVE OF THE PARTY OF THE
Agrobacterium	
Acetobacter	
Legionellaceae	289-29
Legionella	289-29
Flavobacterium	29
Alcaligenes	207.20
Brucella	297-30 302-31
Bordetella	302-31
Francisella	311-31
Anaerobic Gram-Negative Straight, C and Helical Rods	urved
Bacteroidaceae	312-31
Bacteroides	312-3
Fusobacterium	314-3
Selenomonas	
Chromobacterium	
Cardiobacterium	315-3
Gardnerella	316-33
Capnocytophaga	3:
Eikenella	317-31
Mobilunctus	31
Streptobacillus	
Veillonella	
Bacillaceae	
Bacillus	
B.anthracis	
Bacillus sp. Clostridium	
C. botulinum	
C. difficile	
C.perfringens	
C. tetani	
Clostridium sp.	
Corynebacteriaceae	
Corynebacterium	
C. diphtheriae	
Corynebacterium sp.	
Arthrobacter	

#### Actinomycetales

Actinomycetaceae

Actinomyces (Actinomycose)

Bifidobacterium

Mycobacteriaceae

Mycobacteria

Mycobacterium tuberculosis

Mycobacterium bovis, BCG

Tuberculosis

Diagnosis

Pathology

Immunology

Diagnostic Procedures

Chemotherapy

Disinfection

Epidemiology

#### Atypical Mycobacteria

Mycobacterium leprae

Leprosy

Pathology

Immunology

Chemotherapy Epidemiology

Mycobacterium lepraemurium

Mycobacterium paratuberculosis

Mycobacterium ulcerans

Nocardiaceae

Nocardia

Streptomycetaceae

Streptomyces

Other Actinomycetales

#### Spirochaetales

Spirochaetaceae

Spirochaeta

Treponema

Lues

Borrelia

Leptospiraceae

Leptospira

#### Helical/Vibrioid Gram-Negative Bacteria

#### Vibrioide

Spirillum

Campylobacter

Bdellovibrio

Mycoplasmatales		
Mycoplasmataceae		
Mycoplasma		
Ureaplasma		
Acholeplasmataceae		
Acholeplasma		
Spiroplasmataceae		
Spiroplasma		
Anaeroplasma		
		281-288
Rickettsiales		281-282
Rickettsiae		281
Rickettsia		281
Rochalimaea		001 000
Coxiella		281-282
Ehrlichiae		282-283 282-283
Ehrlichia		282-283
Cowdria		
Neorickettsia		
Bartonellaceae		
Bartonella		
Grahamella		
Anaplasmataceae		
Anaplasma		
Haemobartonella		
Eperythrozoon		Married Landson
Chlamydiales		283-288
Chlamydia		283-288
Virology		137-179;308-407
General		137-138;380-381
Poxviridae		138;381-382
Herpesviridae		138-144;382-386
Adenoviridae		144;386
Papovaviridae		144-145;386
Parvoviridae		386-387
Orthomyxoviridae		145-146;387-388
Paramyxoviridae Rhabdoviridae		146-150;388-390
		150-156;390-391
Retroviridae		156;391-392
AIDS		156-168;392-399
Reoviridae		168-170;399-400
Togaviridae		170-172;400-401
Picornaviridae		173-174;402-404
Coronaviridae		404
Arenaviridae		
Bunyaviridae		
Hepatitis		174-177;404-405
Slow Virus Infections		405-406
Other Viruses of Medical	Interest	177-179;406-407
Phages		
Insect and Plant Viruses		

	XI
Mycology	319-360
Basic Mycology	319
Dermatophytes, Dermatomycoses	319-320
Yeastlike Fungi, Candida, Candidamy	
Hansenula Infection, Trichosporono Malassezia Infection	
Cryptococcus neoformans, Cryptoco	320-330
Dimorphic Fungi, Systemic Mycoses,	ccosis 330-333
Blastomyces, Paracoccidioides, Cocc	
Moniliales, Aspergillus, Fusarium, Pae	
Peronosporales, Pythium, Hyphomyc	
Mycotoxins	340-342
Dematiaceous Fungi, Phaeohyphomyc	
Chromoblastomycosis	342-344
Zygomycosis, Mucormycosis, Rhizopu Conidiobolus, Saksenaea	, , , , , , , , , , , , , , , , , , , ,
Therapy of Mycoses, Antimycotics	344-346 346-360
Therapy of mycoses, Antimycotics	340-300
Medical Parasitology	
Protozoa	
Flagellata	
Leishmania	
Trypanosoma	
Giardia	
Trichomonas	
Other Flagellata	
Rhizopoda	
Sporozoa	
Toxoplasma	
Sarcocystis Cryptosporidium	
Plasmodium	
Other Sporozoa	

Pneumocystis Ciliata Helminthes Trematodes Schistosoma Other Trematodes

> Cestodes Taenia Echinococcus Other Cestodes Acanthocephala Nematodes Trichuris Trichinella Strongyloides Enterobius Ascarididae

Ancylostomatidae

Dracunculus Filariida

Other Nematodes

Arthropoda Arachnoidea Insecta

Infections and Infectious Diseases, Special Topics	511-520
Infections and Infectious Diseases	511-516 516-517
Bacteremia	517
Nosocomial Infections Bacterial Flora	517-518 518-520
200000000000000000000000000000000000000	47-93
Environmental Hygiene	180-184;361-368
	408-447;521-527
Environment, General, Ecohygiene, Xenobiotics, Pests	
and Pesticides, Toxicology of Special Chemicals,	
Industrial Hygiene	47-71;521-527
Environmental Hygiene, General	47-49;521-522
Environmental Planning, Environment Protection Environmental Exposure, Ecotoxicity	49-54;522-523
Xenobiotics. General	43-34,322-323
Pests and Pesticides	54-56;523
Toxicology of Chemicals and Hazardous Materials	56-57;523-524
Occupational Diseases, Industrial Hygiene	57-71;524-527
Epidemiology of Non-communicable Diseases	527
Legislation, Guidelines	527
Air, Soil, Drinking Water and Industrial Water, Foods, Pesticide Residues, Consumer Products	408-447
Air	
General	408-419
Weather and Climate	
Bioclimatology and Medical Meteorology	
Air Pollution, Precipitation	408-414
Air Examination	414-415
Effects	415-419
Legislation, Guidelines	419
Soil General	419-421
Structure, Chemistry	419-420
Soil Contamination	420-421
Microbiology, Fauna, Flora	
Soil Examination Legislation, Guidelines	421
Drinking Water and Industrial Water	421-432
General	Manual III
Water Resources	
Water Catchment, Protective Zones, Raw Water	
Water Quality, Constituents and Contaminants Drinking Water Treatment and Disinfection	421-425
Water Distribution	425-428
The state of the s	

	Water Examination	428-431
	Water Requirements, Water Consumption	5
	Water-borne Diseases Legislation, Guidelines	431-432
	Foods, Pesticide Residues, Consumer Products	432-447
	General Food Constitution to the Constitution of the Constitution	432-436
	Food Constituents incl. Coffee, Tea, Tobacco, Beverages etc.	100 110
	Food Production, Catering	436-440
	Packaging Materials, Containers	440
	Food Preservation, Food Additives	440-441
	Pesticide Residues	441-442
	Food Poisonings, Food Infections	442-444
	Food Examination	444-447
	Consumer Products etc.	447
	Legislation, Guidelines	
	ality of Watons Waste Watons Tiguid and Colid	
	ality of Waters, Waste Waters. Liquid and Solid	72-93;361-368
C		
	General	72
	Quality of Surface Waters Water Pollutants	72-78;361-368
	Pollution Control of Surface Waters	78 78-79
	Waste Waters, Sewage	79-83;368
	Domestic and Municipal Sewage, Industrial	10 00,000
	Waste Waters	
	Hospital Waste Waters	
	Waste Water Treatment	83-85;368
	Sewage Sludge	85-90
	Utilization of Sewage and Sewage Sludge	90-91
	Examination of Waste Waters, Liquid and Solid	
	Wastes Salid and Liquid Wastes	01
	Wastes, Solid and Liquid Wastes Domestic Refuse, Industrial Wastes	91
	Wastes from Hospitals and Medical Practice	
	Waste Disposal	91
	Utilization of Wastes (Recycling), Land Treatment	
	Compost	92
	Sewage and Waste-associated Health Risks	
	Legislation, Guidelines	92-93
	blic Health, Housing Hygiene and Community Hygiene,	
	giene of Public Facilities (Hospital, Bathing and imming etc.), Personal Hygiene	180-184
vv		100 104
	General	
	Public Health Services	100
	Special Problems of Public Hygiene	180 180
	Personal Hygiene, Clothing Health Statistics	100
	Traffic Hygiene	
	Community Hygiene, General	
	Housing Hygiene, Indoor Environment	180-181
	Hospital Design and Hygiene, Hospital-associated	
	Infections	181-183

School Design and Hygiene
Kindergartens, Playgrounds
Sport Facilities, Camping, Sauna etc.
Balneology, Spas
Swimming-bath Water, Examination, Treatment,
Disinfection
Swimming-bath Hygiene, Construction, and Communicable Diseases
Legislation, Guidelines

183-184

183

Book Reviews

94-96 185-192;448;528